

What is claimed is:

1. A dispersant comprising a reaction product of a polyalkenyl-substituted mono- or dicarboxylic acid, anhydride or ester; and a polyamine, having from greater than about 1.3 to less than about 1.7 mono- or di-carboxylic acid producing moieties per polyalkenyl moiety and wherein said polyalkenyl moiety has a molecular weight distribution (M_w/M_n) of from about 1.5 to about 2.0.
2. The dispersant of claim 1, wherein said polyalkenyl moiety has a number average molecular weight (M_n) of from about 1800 to about 3000.
3. The dispersant of claim 1, wherein said polyalkenyl-substituted mono- or dicarboxylic acid, anhydride or ester is polyisobutene succinic anhydride.
4. The dispersant of claim 3, wherein the polyisobutene moiety from which said polyisobutene succinic anhydride is derived has a terminal vinylidene content of at least 65 wt. %.
5. The dispersant of claim 4, wherein said polyisobutene moiety comprises HR-PIB.
6. The dispersant of claim 1, wherein said polyamine has on average from about 6 to about 7 nitrogen atoms per molecule.
7. The dispersant of claim 1, wherein said reaction product has from greater than about 1.3 to about 1.6 mono- or dicarboxylic acid producing moieties per polyalkenyl moiety.
8. The dispersant of claim 1, wherein said polyamine comprises at least one primary amine moiety, and said dispersant is derived from about 0.8 to about 1.0 succinyl moieties per primary amine moiety of said polyamine.
9. A lubricating oil composition comprising a major amount of oil of lubricating viscosity and a minor amount of a dispersant of claim 1.

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10. The lubricating oil composition of claim 9, further comprising boron in an amount sufficient to provide a ratio of wt. % boron to wt. % of dispersant nitrogen (B/N), based on the total weight of said composition, of from about 0.05 to about 0.24.

11. The lubricating oil composition of claim 10, wherein said B/N ratio is from about 0.10 to about 0.12.

12. The lubricating oil composition of claim 10, wherein said boron is provided by a borated dispersant.

13. The lubricating oil composition of claim 10, wherein said boron is provided by a second dispersant having a B/N ratio of greater than 0.24 and a functionality of less than 1.3.

14. The dispersant composition of claim 10, wherein boron is provided to said composition by a boron source other than a borated dispersant.

15. The dispersant composition of claim 14, wherein said boron source is selected from the group consisting of borated dispersant VI improver; alkali metal, mixed alkali metal or alkaline earth metal borate; borated overbased metal detergent; borated epoxide; borate ester; and borate amide..

16. The dispersant composition of claim 10, wherein the boron content of said composition is from about 0.2 to about 0.8 wt. %, based on the total weight of active dispersant.

17. The lubricating oil composition of claim 10, wherein said oil of lubricating viscosity is a Group 3 oil, a Group 4 oil, a Group 5 oil, or a mixture thereof.

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18. The lubricating oil composition of claim 10, wherein said oil of lubricating viscosity has a Noack volatility of not greater than 13.5% and a viscosity index (VI) of at least 120.

19. The lubricating oil composition of claim 18, wherein the Noack volatility of said composition is no greater than 12%.

20. The lubricating oil composition of claim 10, further comprising minor amounts of at least one additional additive selected from the group consisting of molybdenum-containing antiwear agents or antioxidants, calcium salicylate detergents and neutral detergents.

21. The lubricating oil composition of claim 10, wherein phosphorous content is no greater than 0.08 wt. %, based on the total weight of said lubricating oil composition.

22. A lubricating oil composition comprising a major amount of an oil of lubricating viscosity and from about 1 to about 7 wt. %, based on the total weight of the lubricating oil composition, of the dispersant of claim 1.

23. An additive concentrate comprising from about 20 to 90 wt. % of a normally liquid, substantially inert, organic solvent or diluent, and from about 10 to about 90 wt. % of additives including a dispersant of claim 1.

24. A method of improving cleanliness of the pistons of an internal combustion engine in operation, said method comprising lubricating said engine with a lubricating oil composition as claimed in claim 22.

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